

SEQUENCE LISTING

<110> Japan Science and Technology Corporation

<120> Amino Acid Transporter And Gene Thereof

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Met Ala Gly Ala Gly Pro Lys Arg Arg Ala Leu Ala Ala Pro Ala
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Ala Glu Glu Lys Glu Glu Ala Arg Glu Lys Met Leu Ala Ala Lys Ser
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gcg gac ggc tcg gcg ccg gca ggc gag ggc gag ggc gtg acc ctg cag 206
Ala Asp Gly Ser Ala Pro Ala Gly Glu Gly Glu Gly Val Thr Leu Gln
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Arg Asn Ile Thr Leu Leu Asn Gly Val Ala Ile Ile Val Gly Thr Ile
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Ile Gly Ser Gly Ile Phe Val Thr Pro Thr Gly Val Leu Lys Glu Ala
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Gly Ser Pro Gly Leu Ala Leu Val Val Trp Ala Ala Cys Gly Val Phe



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Ser Ile Val Gly Ala Leu Cys Tyr Ala Glu Leu Gly Thr Thr Ile Ser	100	105	110	
aaa tcg ggc ggc gac tac gcc tac atg ctg gag gtc tac ggc tcg ctg				446
Lys Ser Gly Gly Asp Tyr Ala Tyr Met Leu Glu Val Tyr Gly Ser Leu	115	120	125	
ccc gcc ttc ctc aag ctc tgg atc gag ctg ctc atc atc cgg cct tca				494
Pro Ala Phe Leu Lys Leu Trp Ile Glu Leu Leu Ile Ile Arg Pro Ser	130	135	140	
tcg cag tac atc gtg gcc ctg gtc ttc gcc acc tac ctg ctc aag ccg				542
Ser Gln Tyr Ile Val Ala Leu Val Phe Ala Thr Tyr Leu Leu Lys Pro	145	150	155	
ctc ttc ccc acc tgc ccg gtg ccc gag gag gca gcc aag ctc gtg gcc				590
Leu Phe Pro Thr Cys Pro Val Pro Glu Glu Ala Ala Lys Leu Val Ala	160	165	170	175
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Cys Leu Cys Val Leu Leu Leu Thr Ala Val Asn Cys Tyr Ser Val Lys	180	185	190	
gcc gcc acc cgg gtc cag gat gcc ttt gcc gcc gcc aag ctc ctg gcc				686
Ala Ala Thr Arg Val Gln Asp Ala Phe Ala Ala Ala Lys Leu Leu Ala	195	200	205	
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Leu Ala Leu Ile Ile Leu Leu Gly Phe Val Gln Ile Gly Lys Gly Asp	210	215	220	
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Val Ser Asn Leu Asp Pro Asn Phe Ser Phe Glu Gly Thr Lys Leu Asp	225	230	235	
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Val Gly Asn Ile Val Leu Ala Leu Tyr Ser Gly Leu Phe Ala Tyr Gly	240	245	250	255
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Gly Trp Asn Tyr Leu Asn Phe Val Thr Glu Glu Met Ile Asn Pro Tyr	260	265	270	
aga aac ctg ccc ctg gcc atc atc atc tcc ctg ccc atc gtg acg ctg				926
Arg Asn Leu Pro Leu Ala Ile Ile Ile Ser Leu Pro Ile Val Thr Leu	275	280	285	
gtg tac gtg ctg acc aac ctg gcc tac ttc acc acc ctg tcc acc gag				974
Val Tyr Val Leu Thr Asn Leu Ala Tyr Phe Thr Thr Leu Ser Thr Glu	290	295	300	
cag atg ctg tcg tcc gag gcc gtg gcc gtg gac ttc ggg aac tat cac				1022
Gln Met Leu Ser Ser Glu Ala Val Ala Val Asp Phe Gly Asn Tyr His	305	310	315	

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Asp	Gly	Ser	Ala	Pro	Ala	Gly	Glu	Gly	Glu	Gly	Val	Thr	Leu	Gln	Arg
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	65				70					75					80
Ser	Pro	Gly	Leu	Ala	Leu	Val	Val	Trp	Ala	Ala	Cys	Gly	Val	Phe	Ser
			85						90					95	

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Ser	Gly	Gly	Asp	Tyr	Ala	Tyr	Met	Leu	Glu	Val	Tyr	Gly	Ser	Leu	Pro	115	120	125
Ala	Phe	Leu	Lys	Leu	Trp	Ile	Glu	Leu	Leu	Ile	Ile	Arg	Pro	Ser	Ser	130	135	140
Gln	Tyr	Ile	Val	Ala	Leu	Val	Phe	Ala	Thr	Tyr	Leu	Leu	Lys	Pro	Leu	145	150	155
Phe	Pro	Thr	Cys	Pro	Val	Pro	Glu	Glu	Ala	Ala	Lys	Leu	Val	Ala	Cys	165	170	175
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Ala	Leu	Ile	Ile	Leu	Leu	Gly	Phe	Val	Gln	Ile	Gly	Lys	Gly	Asp	Val	210	215	220
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Gly	Ser	Val	Asn	Gly	Ser	Leu	Phe	Thr	Ser	Ser	Arg	Leu	Phe	Phe	Val	340	345	350
Gly	Ser	Arg	Glu	Gly	His	Leu	Pro	Ser	Ile	Leu	Ser	Met	Ile	His	Pro	355	360	365
Gln	Leu	Leu	Thr	Pro	Val	Pro	Ser	Leu	Val	Phe	Thr	Cys	Val	Met	Thr	370	375	380
Leu	Leu	Tyr	Ala	Phe	Ser	Lys	Asp	Ile	Phe	Ser	Val	Ile	Asn	Phe	Phe	385	390	395

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 Trp Leu Arg His Arg Lys Pro Glu Leu Glu Arg Pro Ile Lys Val Asn
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 Leu Ala Leu Pro Val Phe Phe Ile Leu Ala Cys Leu Phe Leu Ile Ala
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 Val Ser Phe Trp Lys Thr Pro Val Glu Cys Gly Ile Gly Phe Thr Ile
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 Gln Arg Asn Ile Thr Leu Ile Asn Gly Val Ala Ile Ile Val Gly Thr

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Ala	Gly	Ser	Pro	Gly	Leu	Ser	Leu	Val	Val	Trp	Ala	Val	Cys	Gly	Val		
80					85					90					95		
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Phe	Ser	Ile	Val	Gly	Ala	Leu	Cys	Tyr	Ala	Glu	Leu	Gly	Thr	Thr	Ile		
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Leu	Pro	Ala	Phe	Leu	Lys	Leu	Trp	Ile	Glu	Leu	Leu	Ile	Ile	Arg	Pro		
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Lys	Ala	Ala	Thr	Arg	Val	Gln	Asp	Ala	Phe	Ala	Ala	Ala	Lys	Leu	Leu		
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tcc gtg acc gtg ctc tgc cag aag ctg atg cag gtg gtt cct cag gag	1596
Ser Val Thr Val Leu Cys Gln Lys Leu Met Gln Val Val Pro Gln Glu	
500 505 510	

act tag ccacgtgtcc tgggtgccgc gggagagtgc actgtgactg cttccagaca 1652
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 aacccccctg cctggccctt ttcagtggtc agtgtccagt gctgggtacg gtgtgttccc 3272

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Arg	Arg	Gly	Asp	Gly	Ala	Asp	Pro	Glu	Gly	Glu	Gly	Val	Thr	Leu	Gln	35	40	45	
Arg	Asn	Ile	Thr	Leu	Ile	Asn	Gly	Val	Ala	Ile	Ile	Val	Gly	Thr	Ile	50	55	60	
Ile	Gly	Ser	Gly	Ile	Phe	Val	Thr	Pro	Thr	Gly	Val	Leu	Lys	Glu	Ala	65	70	75	80
Gly	Ser	Pro	Gly	Leu	Ser	Leu	Val	Val	Trp	Ala	Val	Cys	Gly	Val	Phe	85	90	95	
Ser	Ile	Val	Gly	Ala	Leu	Cys	Tyr	Ala	Glu	Leu	Gly	Thr	Thr	Ile	Ser	100	105	110	
Lys	Ser	Gly	Gly	Asp	Tyr	Ala	Tyr	Met	Leu	Glu	Val	Tyr	Gly	Ser	Leu	115	120	125	
Pro	Ala	Phe	Leu	Lys	Leu	Trp	Ile	Glu	Leu	Leu	Ile	Ile	Arg	Pro	Ser	130	135	140	
Ser	Gln	Tyr	Ile	Val	Ala	Leu	Val	Phe	Ala	Thr	Tyr	Leu	Leu	Lys	Pro	145	150	155	160
Val	Phe	Pro	Thr	Cys	Pro	Val	Pro	Glu	Glu	Ala	Ala	Lys	Leu	Val	Ala	165	170	175	
Cys	Leu	Cys	Val	Leu	Leu	Leu	Thr	Ala	Val	Asn	Cys	Tyr	Ser	Val	Lys	180	185	190	
Ala	Ala	Thr	Arg	Val	Gln	Asp	Ala	Phe	Ala	Ala	Ala	Lys	Leu	Leu	Ala	195	200	205	
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Thr	Asn	Leu	Asp	Val	Gly	Asn	Ile	Val	Leu	Ala	Leu	Tyr	Ser	Gly	Leu	245	250	255	
Phe	Ala	Tyr	Gly	Gly	Trp	Asn	Tyr	Leu	Asn	Phe	Val	Thr	Glu	Glu	Met	260	265	270	
Ile	Asn	Pro	Tyr	Arg	Asn	Leu	Pro	Leu	Ala	Ile	Ile	Ile	Ser	Leu	Pro	275	280	285	
Ile	Val	Thr	Leu	Val	Tyr	Val	Leu	Thr	Asn	Leu	Ala	Tyr	Phe	Thr	Thr	290	295	300	
Leu	Ser	Thr	Asn	Gln	Met	Leu	Thr	Ser	Glu	Ala	Val	Ala	Val	Asp	Phe	305	310	315	320
Gly	Asn	Tyr	His	Leu	Gly	Val	Met	Ser	Trp	Ile	Ile	Pro	Val	Phe	Val	325	330	335	
Gly	Leu	Ser	Cys	Phe	Gly	Ser	Val	Asn	Gly	Ser	Leu	Phe	Thr	Ser	Ser	340	345	350	
Arg	Leu	Phe	Phe	Val	Gly	Ser	Arg	Glu	Gly	His	Leu	Pro	Ser	Ile	Leu	355	360	365	
Ser	Met	Ile	His	Pro	Gln	Leu	Leu	Thr	Pro	Val	Pro	Ser	Leu	Val	Phe	370	375	380	
Thr	Cys	Val	Met	Thr	Leu	Met	Tyr	Ala	Phe	Ser	Arg	Asp	Ile	Phe	Ser	385	390	395	400
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Ile	Ile	Gly	Met	Met	Trp	Leu	Arg	Phe	Lys	Lys	Pro	Glu	Leu	Glu	Arg	420	425	430	
Pro	Ile	Lys	Val	Asn	Leu	Ala	Leu	Pro	Val	Phe	Phe	Ile	Leu	Ala	Cys	435	440	445	
Leu	Phe	Leu	Ile	Ala	Val	Ser	Phe	Trp	Lys	Thr	Pro	Leu	Glu	Cys	Gly	450	455	460	
Ile	Gly	Phe	Ala	Ile	Ile	Leu	Ser	Gly	Leu	Pro	Val	Tyr	Phe	Phe	Gly	465	470	475	480
Val	Trp	Trp	Lys	Asn	Lys	Pro	Lys	Trp	Ile	Leu	Gln	Val	Ile	Phe	Ser	485	490	495	
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Met Ser Gln
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gac acc gag gtg gat atg aag gag gtg gag ctg aat gag tta gag ccc 166
Asp Thr Glu Val Asp Met Lys Glu Val Glu Leu Asn Glu Leu Glu Pro
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gag aag cag ccg atg aac gcg gcg tct ggg gcg gcc atg tcc ctg gcg 214
Glu Lys Gln Pro Met Asn Ala Ala Ser Gly Ala Ala Met Ser Leu Ala
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gga gcc gag aag aat ggt ctg gtg aag atc aag gtg gcg gaa gac gag 262
Gly Ala Glu Lys Asn Gly Leu Val Lys Ile Lys Val Ala Glu Asp Glu
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gcg gag gcg gca gcc gcg gct aag ttc acg ggc ctg tcc aag gag gag 310
Ala Glu Ala Ala Ala Ala Lys Phe Thr Gly Leu Ser Lys Glu Glu
55 60 65

ctg ctg aag gtg gca ggc agc ccc ggc tgg gta cgc acc cgc tgg gca 358
Leu Leu Lys Val Ala Gly Ser Pro Gly Trp Val Arg Thr Arg Trp Ala
70 75 80

ctg ctg ctg ctc ttc tgg ctc ggc tgg ctc ggc atg ctt gct ggt gcc 406
Leu Leu Leu Leu Phe Trp Leu Gly Trp Leu Gly Met Leu Ala Gly Ala
85 90 95

gtg gtc ata atc gtg cga gcg ccg cgt tgt cgc gag cta ccg gcg cag 454
Val Val Ile Ile Val Arg Ala Pro Arg Cys Arg Glu Leu Pro Ala Gln
100 105 110 115

aag tgg tgg cac acg ggc gcc ctc tac cgc atc ggc gac ctt cag gcc 502
Lys Trp Trp His Thr Gly Ala Leu Tyr Arg Ile Gly Asp Leu Gln Ala
120 125 130

ttc cag ggc cac ggc gcg ggc aac ctg gcg ggt ctg aag ggg cgt ctc 550
Phe Gln Gly His Gly Ala Gly Asn Leu Ala Gly Leu Lys Gly Arg Leu
135 140 145

gat tac ctg agc tct ctg aag gtg aag ggc ctt gtg ctg ggt cca att	598
Asp Tyr Leu Ser Ser Leu Lys Val Lys Gly Leu Val Leu Gly Pro Ile	
150 155 160	
cac aag aac cag aag gat gat gtc gct cag act gac ttg ctg cag atc	646
His Lys Asn Gln Lys Asp Asp Val Ala Gln Thr Asp Leu Leu Gln Ile	
165 170 175	
gac ccc aat ttt ggc tcc aag gaa gat ttt gac agt ctc ttg caa tcg	694
Asp Pro Asn Phe Gly Ser Lys Glu Asp Phe Asp Ser Leu Leu Gln Ser	
180 185 190 195	
gct aaa aaa aag agc atc cgt gtc att ctg gac ctt act ccc aac tac	742
Ala Lys Lys Lys Ser Ile Arg Val Ile Leu Asp Leu Thr Pro Asn Tyr	
200 205 210	
cgg ggt gag aac tcg tgg ttc tcc act cag gtt gac act gtg gcc acc	790
Arg Gly Glu Asn Ser Trp Phe Ser Thr Gln Val Asp Thr Val Ala Thr	
215 220 225	
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Lys Val Lys Asp Ala Leu Glu Phe Trp Leu Gln Ala Gly Val Asp Gly	
230 235 240	
ttc cag gtt cgg gac ata gag aat ctg aag gat gca tcc tca ttc ttg	886
Phe Gln Val Arg Asp Ile Glu Asn Leu Lys Asp Ala Ser Ser Phe Leu	
245 250 255	
gct gag tgg caa aat atc acc aag ggc ttc agt gaa gac agg ctc ttg	934
Ala Glu Trp Gln Asn Ile Thr Lys Gly Phe Ser Glu Asp Arg Leu Leu	
260 265 270 275	
att gcg ggg act aac tcc tcc gac ctt cag cag atc ctg agc cta ctc	982
Ile Ala Gly Thr Asn Ser Ser Asp Leu Gln Gln Ile Leu Ser Leu Leu	
280 285 290	
gaa tcc aac aaa gac ttg ctg ttg act agc tca tac ctg tct gat tct	1030
Glu Ser Asn Lys Asp Leu Leu Leu Thr Ser Ser Tyr Leu Ser Asp Ser	
295 300 305	
ggg tct act ggg gag cat aca aaa tcc cta gtc aca cag tat ttg aat	1078
Gly Ser Thr Gly Glu His Thr Lys Ser Leu Val Thr Gln Tyr Leu Asn	
310 315 320	
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Ala Thr Gly Asn Arg Trp Cys Ser Trp Ser Leu Ser Gln Ala Arg Leu	
325 330 335	
ctg act tcc ttc ttg ccg gct caa ctt ctc cga ctc tac cag ctg atg	1174
Leu Thr Ser Phe Leu Pro Ala Gln Leu Leu Arg Leu Tyr Gln Leu Met	
340 345 350 355	
ctc ttc acc ctg cca ggg acc cct gtt ttc agc tac ggg gat gag att	1222
Leu Phe Thr Leu Pro Gly Thr Pro Val Phe Ser Tyr Gly Asp Glu Ile	
360 365 370	

ggc ctg gat gca gct gcc ctt cct gga cag cct atg gag gct cca gtc 1270
 Gly Leu Asp Ala Ala Ala Leu Pro Gly Gln Pro Met Glu Ala Pro Val
 375 380 385

atg ctg tgg gat gag tcc agc ttc cct gac atc cca ggg gct gta agt 1318
 Met Leu Trp Asp Glu Ser Ser Phe Pro Asp Ile Pro Gly Ala Val Ser
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gcc aac atg act gtg aag ggc cag agt gaa gac cct ggc tcc ctc ctt 1366
 Ala Asn Met Thr Val Lys Gly Gln Ser Glu Asp Pro Gly Ser Leu Leu
 405 410 415

tcc ttg ttc cgg cgg ctg agt gac cag cgg agt aag gag cgc tcc cta 1414
 Ser Leu Phe Arg Arg Leu Ser Asp Gln Arg Ser Lys Glu Arg Ser Leu
 420 425 430 435

ctg cat ggg gac ttc cac gcg ttc tcc gct ggg cct gga ctc ttc tcc 1462
 Leu His Gly Asp Phe His Ala Phe Ser Ala Gly Pro Gly Leu Phe Ser
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tat atc cgc cac tgg gac cag aat gag cgt ttt ctg gta gtg ctt aac 1510
 Tyr Ile Arg His Trp Asp Gln Asn Glu Arg Phe Leu Val Val Leu Asn
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 Phe Gly Asp Val Gly Leu Ser Ala Gly Leu Gln Ala Ser Asp Leu Pro
 470 475 480

gcc agc gcc agc ctc cca gcc aag gct gac ctc ctg ctc agc acc cag 1606
 Ala Ser Ala Ser Leu Pro Ala Lys Ala Asp Leu Leu Leu Ser Thr Gln
 485 490 495

cca ggc cgt gag gag ggc tcc cct ctt gag ctg gaa cgc ctg aaa ctg 1654
 Pro Gly Arg Glu Glu Gly Ser Pro Leu Glu Leu Glu Arg Leu Lys Leu
 500 505 510 515

gag cct cac gaa ggg ctg ctg ctc cgc ttc ccc tac gcg gcc tga 1699
 Glu Pro His Glu Gly Leu Leu Leu Arg Phe Pro Tyr Ala Ala
 520 525 530

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Ala	Gly	Ala	Val	Val	Ile	Ile	Val	Arg	Ala	Pro	Arg	Cys	Arg	Glu	Leu	
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Gly	Arg	Leu	Asp	Tyr	Leu	Ser	Ser	Leu	Lys	Val	Lys	Gly	Leu	Val	Leu	
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Gly	Pro	Ile	His	Lys	Asn	Gln	Lys	Asp	Asp	Val	Ala	Gln	Thr	Asp	Leu	
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Val	Asp	Gly	Phe	Gln	Val	Arg	Asp	Ile	Glu	Asn	Leu	Lys	Asp	Ala	Ser	
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Ser	Asp	Ser	Gly	Ser	Thr	Gly	Glu	His	Thr	Lys	Ser	Leu	Val	Thr	Gln	
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Ala	Arg	Leu	Leu	Thr	Ser	Phe	Leu	Pro	Ala	Gln	Leu	Leu	Arg	Leu	Tyr				
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Gln	Leu	Met	Leu	Phe	Thr	Leu	Pro	Gly	Thr	Pro	Val	Phe	Ser	Tyr	Gly				
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Asp	Glu	Ile	Gly	Leu	Asp	Ala	Ala	Ala	Leu	Pro	Gly	Gln	Pro	Met	Glu				
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Arg	Ser	Leu	Leu	His	Gly	Asp	Phe	His	Ala	Phe	Ser	Ala	Gly	Pro	Gly				
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Val	Leu	Asn	Phe	Gly	Asp	Val	Gly	Leu	Ser	Ala	Gly	Leu	Gln	Ala	Ser				
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Asp	Leu	Pro	Ala	Ser	Ala	Ser	Leu	Pro	Ala	Lys	Ala	Asp	Leu	Leu	Leu				
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Ser	Thr	Gln	Pro	Gly	Arg	Glu	Glu	Gly	Ser	Pro	Leu	Glu	Leu	Glu	Arg				
		500						505					510						
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<211> 1797

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<213> Rat

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Val Glu Leu Asn Glu Leu Glu Pro Glu Lys Gln Pro Met Asn Ala Ala	
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Asp Gly Ala Ala Ala Gly Glu Lys Asn Gly Leu Val Lys Ile Lys Val	
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Ala Glu Asp Glu Ala Glu Ala Gly Val Lys Phe Thr Gly Leu Ser Lys	
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gag gag cta ttg aag gta gct ggc agc ccg ggc tgg gtg cgc acc cgc	244
Glu Glu Leu Leu Lys Val Ala Gly Ser Pro Gly Trp Val Arg Thr Arg	
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Trp Ala Leu Leu Leu Leu Phe Trp Leu Gly Trp Leu Gly Met Leu Ala	
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Gly Ala Val Val Ile Ile Val Arg Ala Pro Arg Cys Arg Glu Leu Pro	
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Val Gln Arg Trp Trp His Lys Gly Ala Leu Tyr Arg Ile Gly Asp Leu	
110 115 120	
cag gcc ttc gta ggc ccg gaa gcg aga ggc ata gct ggt ctg aag aac	436
Gln Ala Phe Val Gly Pro Glu Ala Arg Gly Ile Ala Gly Leu Lys Asn	
125 130 135	
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His Leu Glu Tyr Leu Ser Thr Leu Lys Val Lys Gly Leu Val Leu Gly	
140 145 150 155	
cca att cac aag aac cag aag gat gaa gtc aat gaa acc gac ttg aaa	532
Pro Ile His Lys Asn Gln Lys Asp Glu Val Asn Glu Thr Asp Leu Lys	
160 165 170	
cag att gat ccc gat tta ggc tcc cag gaa gat ttt aaa gac ctt cta	580
Gln Ile Asp Pro Asp Leu Gly Ser Gln Glu Asp Phe Lys Asp Leu Leu	
175 180 185	
caa agt gcc aag aaa aag agc att cac atc att ttg gac ctc act ccc	628
Gln Ser Ala Lys Lys Lys Ser Ile His Ile Ile Leu Asp Leu Thr Pro	
190 195 200	
aac tat aag ggc cag aat gca tgg ttc ctc cct cct cag gct gac att	676
Asn Tyr Lys Gly Gln Asn Ala Trp Phe Leu Pro Pro Gln Ala Asp Ile	
205 210 215	

gta gcc acc aaa atg aag gag gct ctg agt tct tgg ttg cag gac ggt	724
Val Ala Thr Lys Met Lys Glu Ala Leu Ser Ser Trp Leu Gln Asp Gly	
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Val Asp Gly Phe Gln Val Arg Asp Val Gly Lys Leu Ala Asn Ala Ser	
240 245 250	
ttg tac ttg gct gag tgg cag aat atc acc aag aac ttc agt gag gac	820
Leu Tyr Leu Ala Glu Trp Gln Asn Ile Thr Lys Asn Phe Ser Glu Asp	
255 260 265	
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Arg Leu Leu Ile Ala Gly Thr Ala Ser Ser Asp Leu Gln Gln Ile Val	
270 275 280	
aac ata ctt gaa tcc acc agc gat ctg ctg ctg acc agc tca tac ctg	916
Asn Ile Leu Glu Ser Thr Ser Asp Leu Leu Leu Thr Ser Ser Tyr Leu	
285 290 295	
tca cag ccc gtt ttc act ggg gag cat gca gaa ctc cta gtg att aag	964
Ser Gln Pro Val Phe Thr Gly Glu His Ala Glu Leu Leu Val Ile Lys	
300 305 310 315	
tat ttg aat gcc act ggc agc cgc tgg tgc agc tgg agt gtg tcg cag	1012
Tyr Leu Asn Ala Thr Gly Ser Arg Trp Cys Ser Trp Ser Val Ser Gln	
320 325 330	
gca gga ctc ctg aca tcc ttt ata ccg gct cag ttt ctc cga ctc tac	1060
Ala Gly Leu Leu Thr Ser Phe Ile Pro Ala Gln Phe Leu Arg Leu Tyr	
335 340 345	
cag ctg ctg ctc ttc act ctg cca gga act cct gtt ttc agc tat ggg	1108
Gln Leu Leu Leu Phe Thr Leu Pro Gly Thr Pro Val Phe Ser Tyr Gly	
350 355 360	
gat gag ctt ggc ctt cag gca gtt gcc ctt cct gga cag cct atg gag	1156
Asp Glu Leu Gly Leu Gln Ala Val Ala Leu Pro Gly Gln Pro Met Glu	
365 370 375	
gct cca ttc atg ctg tgg aat gag tct agc aac tcc caa acc tca agt	1204
Ala Pro Phe Met Leu Trp Asn Glu Ser Ser Asn Ser Gln Thr Ser Ser	
380 385 390 395	
cct gta agc ctc aac atg aca gtg aag ggc caa aat gaa gac ccc ggc	1252
Pro Val Ser Leu Asn Met Thr Val Lys Gly Gln Asn Glu Asp Pro Gly	
400 405 410	
tcc ctc ctc acc cag ttc cgg cga ctg agt gac ctc cgt ggt aag gag	1300
Ser Leu Leu Thr Gln Phe Arg Arg Leu Ser Asp Leu Arg Gly Lys Glu	
415 420 425	
cgc tct ctg tta cac ggt gac ttt gat gca ctg tct tcc tca tct ggg	1348
Arg Ser Leu Leu His Gly Asp Phe Asp Ala Leu Ser Ser Ser Ser Gly	
430 435 440	

ctc ttc tcc tac gtc cgc cac tgg gac cag aat gag cgt tac ctg gtg 1396
 Leu Phe Ser Tyr Val Arg His Trp Asp Gln Asn Glu Arg Tyr Leu Val
 445 450 455

gtg ctc aac ttc cag gat gtg ggc ctg tca gcc agg gta gga gcc tcc 1444
 Val Leu Asn Phe Gln Asp Val Gly Leu Ser Ala Arg Val Gly Ala Ser
 460 465 470 475

aac ctc cct gct ggc ata agc ctg cca gcc agt gct aac ctt ttg ctt 1492
 Asn Leu Pro Ala Gly Ile Ser Leu Pro Ala Ser Ala Asn Leu Leu Leu
 480 485 490

agt act gac agc acc cgg cta agc cgt gag gag ggc acc tcc ctg agc 1540
 Ser Thr Asp Ser Thr Arg Leu Ser Arg Glu Glu Gly Thr Ser Leu Ser
 495 500 505

ctg gaa aac ctg agc ctg aat cct tat gag ggc ttg ttg tta cag ttc 1588
 Leu Glu Asn Leu Ser Leu Asn Pro Tyr Glu Gly Leu Leu Leu Gln Phe
 510 515 520

cct ttt gtg gcc tga tccctctaca cagaacctgc cacccttctt tcctctctca 1643
 Pro Phe Val Ala
 525

ggcctttgga attctggtct ttctctcctt attttgtttt tgttttttaa cttttgcaga 1703

ttacatatga attcttacac tggggggtttt tgtttttcaaa ataaaaaaaa tcacccttaa 1763

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1797

<210> 8
 <211> 527
 <212> PRT
 <213> Rat

<400> 8
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 1 5 10 15
 Leu Glu Pro Glu Lys Gln Pro Met Asn Ala Ala Asp Gly Ala Ala Ala
 20 25 30
 Gly Glu Lys Asn Gly Leu Val Lys Ile Lys Val Ala Glu Asp Glu Ala
 35 40 45
 Glu Ala Gly Val Lys Phe Thr Gly Leu Ser Lys Glu Glu Leu Leu Lys
 50 55 60
 Val Ala Gly Ser Pro Gly Trp Val Arg Thr Arg Trp Ala Leu Leu Leu
 65 70 75 80
 Leu Phe Trp Leu Gly Trp Leu Gly Met Leu Ala Gly Ala Val Val Ile
 85 90 95
 Ile Val Arg Ala Pro Arg Cys Arg Glu Leu Pro Val Gln Arg Trp Trp
 100 105 110

His	Lys	Gly	Ala	Leu	Tyr	Arg	Ile	Gly	Asp	Leu	Gln	Ala	Phe	Val	Gly
		115					120					125			
Pro	Glu	Ala	Arg	Gly	Ile	Ala	Gly	Leu	Lys	Asn	His	Leu	Glu	Tyr	Leu
	130					135					140				
Ser	Thr	Leu	Lys	Val	Lys	Gly	Leu	Val	Leu	Gly	Pro	Ile	His	Lys	Asn
145					150					155					160
Gln	Lys	Asp	Glu	Val	Asn	Glu	Thr	Asp	Leu	Lys	Gln	Ile	Asp	Pro	Asp
				165					170					175	
Leu	Gly	Ser	Gln	Glu	Asp	Phe	Lys	Asp	Leu	Leu	Gln	Ser	Ala	Lys	Lys
			180					185					190		
Lys	Ser	Ile	His	Ile	Ile	Leu	Asp	Leu	Thr	Pro	Asn	Tyr	Lys	Gly	Gln
		195					200					205			
Asn	Ala	Trp	Phe	Leu	Pro	Pro	Gln	Ala	Asp	Ile	Val	Ala	Thr	Lys	Met
	210					215					220				
Lys	Glu	Ala	Leu	Ser	Ser	Trp	Leu	Gln	Asp	Gly	Val	Asp	Gly	Phe	Gln
225					230					235					240
Val	Arg	Asp	Val	Gly	Lys	Leu	Ala	Asn	Ala	Ser	Leu	Tyr	Leu	Ala	Glu
				245					250					255	
Trp	Gln	Asn	Ile	Thr	Lys	Asn	Phe	Ser	Glu	Asp	Arg	Leu	Leu	Ile	Ala
			260					265					270		
Gly	Thr	Ala	Ser	Ser	Asp	Leu	Gln	Gln	Ile	Val	Asn	Ile	Leu	Glu	Ser
		275					280					285			
Thr	Ser	Asp	Leu	Leu	Leu	Thr	Ser	Ser	Tyr	Leu	Ser	Gln	Pro	Val	Phe
	290					295					300				
Thr	Gly	Glu	His	Ala	Glu	Leu	Leu	Val	Ile	Lys	Tyr	Leu	Asn	Ala	Thr
305					310					315					320
Gly	Ser	Arg	Trp	Cys	Ser	Trp	Ser	Val	Ser	Gln	Ala	Gly	Leu	Leu	Thr
				325					330					335	
Ser	Phe	Ile	Pro	Ala	Gln	Phe	Leu	Arg	Leu	Tyr	Gln	Leu	Leu	Leu	Phe
			340					345					350		
Thr	Leu	Pro	Gly	Thr	Pro	Val	Phe	Ser	Tyr	Gly	Asp	Glu	Leu	Gly	Leu
		355					360					365			
Gln	Ala	Val	Ala	Leu	Pro	Gly	Gln	Pro	Met	Glu	Ala	Pro	Phe	Met	Leu
						375					380				
Trp	Asn	Glu	Ser	Ser	Asn	Ser	Gln	Thr	Ser	Ser	Pro	Val	Ser	Leu	Asn
385					390					395					400
Met	Thr	Val	Lys	Gly	Gln	Asn	Glu	Asp	Pro	Gly	Ser	Leu	Leu	Thr	Gln
				405					410					415	

Phe Arg Arg Leu Ser Asp Leu Arg Gly Lys Glu Arg Ser Leu Leu His
 420 425 430
 Gly Asp Phe Asp Ala Leu Ser Ser Ser Ser Gly Leu Phe Ser Tyr Val
 435 440 445
 Arg His Trp Asp Gln Asn Glu Arg Tyr Leu Val Val Leu Asn Phe Gln
 450 455 460
 Asp Val Gly Leu Ser Ala Arg Val Gly Ala Ser Asn Leu Pro Ala Gly
 465 470 475 480
 Ile Ser Leu Pro Ala Ser Ala Asn Leu Leu Leu Ser Thr Asp Ser Thr
 485 490 495
 Arg Leu Ser Arg Glu Glu Gly Thr Ser Leu Ser Leu Glu Asn Leu Ser
 500 505 510
 Leu Asn Pro Tyr Glu Gly Leu Leu Leu Gln Phe Pro Phe Val Ala
 515 520 525

<210> 9
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Artificially
 synthesized primer sequence

<220>
 <221> primer_bind
 <222> (1)..(22)

<400> 9
 cgaagtggac atgaaagatg tg

22

<210> 10
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Artificially
 synthesized primer sequence

<220>
 <221> primer_bind
 <222> (1)..(22)

<400> 10
 aaactaggcc cttcaccttc ag

22

<210> 11
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>
<221> primer_bind
<222> (1)..(24)

<400> 11
actgctgctg ctcttctggc tcgg

24

<210> 12
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>
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<222> (1)..(24)

<400> 12
gtggatgggt tccaggttcg ggac

24

<210> 13
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>
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<222> (1)..(24)

<400> 13
tgctgtggga tgagtccagc ttcc

24

<210> 14
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>

<221> primer_bind

<222> (1)..(24)

<400> 14

gcaggagggtc agccttggct ggca

24

<210> 15

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>

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<222> (1)..(24)

<400> 15

cttgctgag acaaactcca gctg

24

<210> 16

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>

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<222> (1)..(24)

<400> 16

actgtcaaaa tcttccttgg agcc

24

<210> 17

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>

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<222> (1)..(24)

<400> 17
ttctcgggct ctaactcatt cagc 24

<210> 18
<211> 23
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>
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<222> (1)..(23)

<400> 18
tgctgctgct cacggccgtg aac 23

<210> 19
<211> 17
<212> DNA
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<220>
<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>
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<222> (1)..(17)

<400> 19
tggcggcctt cacgctg 17

<210> 20
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>
<221> primer_bind
<222> (1)..(25)

<400> 20
atctagattg gacacatcac ccttc 25

<210> 21

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>
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<222> (1)..(22)

<400> 21
gtggtgaagt aggccagggtt gg

22

<210> 22
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
synthesized primer sequence

<220>
<221> primer_bind
<222> (1)..(21)

<400> 22
gtgggggtccc ggaaggcca c

21

<210> 23
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
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synthesized primer sequence

<220>
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<222> (1)..(22)

<400> 23
cttggttttc caccagacc cg

22

<210> 24
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<212> DNA
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synthesized primer sequence

<220>

<221> primer_bind

<222> (1)..(22)

<400> 24

tgagggatga gattcgtacc ag

22

<210> 25

<211> 23

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially synthesized primer sequence

<220>

<221> primer_bind

<222> (1)..(23)

<400> 25

cctgggagga atcaccacc ttg

23

<210> 26

<211> 1524

<212> RNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1524)

<400> 26

aug gcg ggu gcg ggc ccg aag cgg cgc gcg cua gcg gcg ccg gcg gcc	48
Met Ala Gly Ala Gly Pro Lys Arg Arg Ala Leu Ala Ala Pro Ala Ala	
1 5 10 15	

gag gag aag gaa gag gcg cgg gag aag aug cug gcc gcc aag agc gcg	96
Glu Glu Lys Glu Glu Ala Arg Glu Lys Met Leu Ala Ala Lys Ser Ala	
20 25 30	

gac ggc ucg gcg ccg gca ggc gag ggc gag ggc gug acc cug cag cgg	144
Asp Gly Ser Ala Pro Ala Gly Glu Gly Glu Gly Val Thr Leu Gln Arg	
35 40 45	

aac auc acg cug cuc aac ggc gug gcc auc auc gug ggg acc auu auc	192
Asn Ile Thr Leu Leu Asn Gly Val Ala Ile Ile Val Gly Thr Ile Ile	
50 55 60	

ggc ucg ggc auc uuc gug acg ccc acg ggc gug cuc aag gag gca ggc	240
Gly Ser Gly Ile Phe Val Thr Pro Thr Gly Val Leu Lys Glu Ala Gly	
65 70 75 80	

ucg ccg ggg cug gcg cug gug gug ugg gcc gcg ugc ggc guc uuc ucc	288
Ser Pro Gly Leu Ala Leu Val Val Trp Ala Ala Cys Gly Val Phe Ser	
85 90 95	
auc gug ggc gcg cuc ugc uac gcg gag cuc ggc acc acc auc ucc aaa	336
Ile Val Gly Ala Leu Cys Tyr Ala Glu Leu Gly Thr Thr Ile Ser Lys	
100 105 110	
ucg ggc ggc gac uac gcc uac aug cug gag guc uac ggc ugc cug ccc	384
Ser Gly Gly Asp Tyr Ala Tyr Met Leu Glu Val Tyr Gly Ser Leu Pro	
115 120 125	
gcc uuc cuc aag cuc ugg auc gag cug cuc auc auc cgg ccu uca ugc	432
Ala Phe Leu Lys Leu Trp Ile Glu Leu Leu Ile Ile Arg Pro Ser Ser	
130 135 140	
cag uac auc gug gcc cug guc uuc gcc acc uac cug cuc aag ccg cuc	480
Gln Tyr Ile Val Ala Leu Val Phe Ala Thr Tyr Leu Leu Lys Pro Leu	
145 150 155 160	
uuc ccc acc ugc ccg gug ccc gag gag gca gcc aag cuc gug gcc ugc	528
Phe Pro Thr Cys Pro Val Pro Glu Glu Ala Ala Lys Leu Val Ala Cys	
165 170 175	
cuc ugc gug cug cug cuc acg gcc gug aac ugc uac agc gug aag gcc	576
Leu Cys Val Leu Leu Leu Thr Ala Val Asn Cys Tyr Ser Val Lys Ala	
180 185 190	
gcc acc cgg guc cag gau gcc uuu gcc gcc gcc aag cuc cug gcc cug	624
Ala Thr Arg Val Gln Xaa Ala Phe Ala Ala Ala Lys Leu Leu Ala Leu	
195 200 205	
gcc cug auc auc cug cug ggc uuc guc cag auc ggg aag ggu gau gug	672
Ala Leu Ile Ile Leu Leu Gly Phe Val Gln Ile Gly Lys Gly Xaa Val	
210 215 220	
ucc aaU cua gau ccc aac uuc uca uuu gaa ggc acc aaa cug gau gug	720
Ser Asn Leu Xaa Pro Asn Phe Ser Phe Glu Gly Thr Lys Leu Xaa Val	
225 230 235 240	
ggg aac auu gug cug gca uua uac agc ggc cuc uuu gcc uau gga gga	768
Gly Asn Ile Val Leu Ala Leu Tyr Ser Gly Leu Phe Ala Tyr Gly Gly	
245 250 255	
ugg aaU uac uug aaU uuc guc aca gag gaa aug auc aac ccc uac aga	816
Trp Asn Tyr Leu Asn Phe Val Thr Glu Glu Met Ile Asn Pro Tyr Arg	
260 265 270	
aac cug ccc cug gcc auc auc auc ucc cug ccc auc gug acg cug gug	864
Asn Leu Pro Leu Ala Ile Ile Ile Ser Leu Pro Ile Val Thr Leu Val	
275 280 285	
uac gug cug acc aac cug gcc uac uuc acc acc cug ucc acc gag cag	912
Tyr Val Leu Thr Asn Leu Ala Tyr Phe Thr Thr Leu Ser Thr Glu Gln	
290 295 300	
aug cug ugc ucc gag gcc gug gcc gug gac uuc ggg aac uau cac cug	960

Met	Leu	Ser	Ser	Glu	Ala	Val	Ala	Val	Asp	Phe	Gly	Asn	Tyr	His	Leu	
305					310					315					320	
ggc	guc	aug	ucc	ugg	auc	auc	ccc	guc	uuc	gug	ggc	cug	ucc	ugc	uuc	1008
Gly	Val	Met	Ser	Trp	Ile	Ile	Pro	Val	Phe	Val	Gly	Leu	Ser	Cys	Phe	
				325					330					335		
ggc	ucc	guc	aaU	ggg	ucc	cug	uuc	aca	ucc	ucc	agg	cuc	uuc	uuc	gug	1056
Gly	Ser	Val	Asn	Gly	Ser	Leu	Phe	Thr	Ser	Ser	Arg	Leu	Phe	Phe	Val	
			340					345					350			
ggg	ucc	cgg	gaa	ggc	cac	cug	ccc	ucc	auc	cuc	ucc	aug	auc	cac	cca	1104
Gly	Ser	Arg	Glu	Gly	His	Leu	Pro	Ser	Ile	Leu	Ser	Met	Ile	His	Pro	
		355					360					365				
cag	cuc	cuc	acc	ccc	gug	ccg	ucc	cuc	gug	uuc	acg	ugu	gug	aug	acg	1152
Gln	Leu	Leu	Thr	Pro	Val	Pro	Ser	Leu	Val	Phe	Thr	Cys	Val	Met	Thr	
	370					375					380					
cug	cuc	uac	gcc	uuc	ucc	aag	gac	auc	uuc	ucc	guc	auc	aac	uuc	uuc	1200
Leu	Leu	Tyr	Ala	Phe	Ser	Lys	Asp	Ile	Phe	Ser	Val	Ile	Asn	Phe	Phe	
385					390					395					400	
agc	uuc	uuc	aac	ugg	cuc	ugc	gug	gcc	cug	gcc	auc	auc	ggc	aug	auc	1248
Ser	Phe	Phe	Asn	Trp	Leu	Cys	Val	Ala	Leu	Ala	Ile	Ile	Gly	Met	Ile	
			405					410					415			
ugg	cug	cgc	cac	aga	aag	ccu	gag	cuu	gag	cgg	ccc	auc	aag	gug	aac	1296
Trp	Leu	Arg	His	Arg	Lys	Pro	Glu	Leu	Glu	Arg	Pro	Ile	Lys	Val	Asn	
			420				425					430				
cug	gcc	cug	ccu	gug	uuc	uuc	auc	cug	gcc	ugc	cuc	uuc	cug	auc	gcc	1344
Leu	Ala	Leu	Pro	Val	Phe	Phe	Ile	Leu	Ala	Cys	Leu	Phe	Leu	Ile	Ala	
		435					440					445				
guc	ucc	uuc	ugg	aag	aca	ccc	gug	gag	ugu	ggc	auc	ggc	uuc	acc	auc	1392
Val	Ser	Phe	Trp	Lys	Thr	Pro	Val	Glu	Cys	Gly	Ile	Gly	Phe	Thr	Ile	
	450					455				460						
auc	cuc	agc	ggg	cug	ccc	guc	uac	uuc	uuc	ggg	guc	ugg	ugg	aaa	aac	1440
Ile	Leu	Ser	Gly	Leu	Pro	Val	Tyr	Phe	Phe	Gly	Val	Trp	Trp	Lys	Asn	
465					470					475					480	
aag	ccc	aag	ugg	cuc	cuc	cag	ggc	auc	uuc	ucc	acg	acc	guc	cug	ugu	1488
Lys	Pro	Lys	Trp	Leu	Leu	Gln	Gly	Ile	Phe	Ser	Thr	Thr	Val	Leu	Cys	
			485					490					495			
cag	aag	cuc	aug	cag	gug	guc	ccc	cag	gag	aca	uag					1524
Gln	Lys	Leu	Met	Gln	Val	Val	Pro	Gln	Glu	Thr						
			500					505								

<210> 27

<211> 1590

<212> RNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1590)

<400> 27

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Met Ser Gln Asp Thr Glu Val Xaa Met Lys Glu Val Glu Leu Asn Glu	
1 5 10 15	
uua gag ccc gag aag cag ccg aug aac gcg gcg ucu ggg gcg gcc aug	96
Leu Glu Pro Glu Lys Gln Pro Met Asn Ala Ala Ser Gly Ala Ala Met	
20 25 30	
ucc cug gcg gga gcc gag aag aaU ggu cug gug aag auc aag gug gcg	144
Ser Leu Ala Gly Ala Glu Lys Asn Gly Leu Val Lys Ile Lys Val Ala	
35 40 45	
gaa gac gag gcg gag gcg gca gcc gcg gcu aag uuc acg ggc cug ucc	192
Glu Asp Glu Ala Glu Ala Ala Ala Lys Phe Thr Gly Leu Ser	
50 55 60	
aag gag gag cug cug aag gug gca ggc agc ccc ggc ugg gua cgc acc	240
Lys Glu Glu Leu Leu Lys Val Ala Gly Ser Pro Gly Trp Val Arg Thr	
65 70 75 80	
cgc ugg gca cug cug cug cuc uuc ugg cuc ggc ugg cuc ggc aug cuu	288
Arg Trp Ala Leu Leu Leu Leu Phe Trp Leu Gly Trp Leu Gly Met Leu	
85 90 95	
gcu ggu gcc gug guc aua auc gug cga gcg ccg cgu ugu cgc gag cua	336
Ala Gly Ala Val Val Ile Ile Val Arg Ala Pro Arg Cys Arg Glu Leu	
100 105 110	
ccg gcg cag aag ugg ugg cac acg ggc gcc cuc uac cgc auc ggc gac	384
Pro Ala Gln Lys Trp Trp His Thr Gly Ala Leu Tyr Arg Ile Gly Asp	
115 120 125	
cuu cag gcc uuc cag ggc cac ggc gcg ggc aac cug gcg ggu cug aag	432
Leu Gln Ala Phe Gln Gly His Gly Ala Gly Asn Leu Ala Gly Leu Lys	
130 135 140	
ggg cgu cuc gau uac cug agc ucu cug aag gug aag ggc cuu gug cug	480
Gly Arg Leu Xaa Tyr Leu Ser Ser Leu Lys Val Lys Gly Leu Val Leu	
145 150 155 160	
ggg cca auu cac aag aac cag aag gau gau guc gcu cag acu gac uug	528
Gly Pro Ile His Lys Asn Gln Lys Xaa Xaa Val Ala Gln Xaa Asp Leu	
165 170 175	
cug cag auc gac ccc aaU uuU ggc ucc aag gaa gau uuU gac agu cuc	576
Leu Gln Ile Asp Pro Asn Phe Gly Ser Lys Glu Xaa Phe Asp Ser Leu	
180 185 190	
uug caa ucg gcu aaa aaa aag agc auc cgu guc auu cug gac cuu acu	624
Leu Gln Ser Ala Lys Lys Lys Ser Ile Arg Val Ile Leu Asp Leu Xaa	
195 200 205	

ccc aac uac cgg ggu gag aac ucg ugg uuc ucc acu cag guu gac acu	672
Pro Asn Tyr Arg Gly Glu Asn Ser Trp Phe Ser Xaa Gln Val Asp Xaa	
210 215 220	
gug gcc acc aag gug aag gau gcu cug gag uuu ugg cug caa gcu ggc	720
Val Ala Thr Lys Val Lys Xaa Ala Leu Glu Phe Trp Leu Gln Ala Gly	
225 230 235 240	
gug gau ggg uuc cag guu cgg gac aua gag aaU cug aag gau gca ucc	768
Val Xaa Gly Phe Gln Val Arg Asp Ile Glu Asn Leu Lys Xaa Ala Ser	
245 250 255	
uca uuc uug gcu gag ugg caa aaU auc acc aag ggc uuc agu gaa gac	816
Ser Phe Leu Ala Glu Trp Gln Asn Ile Thr Lys Gly Phe Ser Glu Asp	
260 265 270	
agg cuc uug auu gcg ggg acu aac ucc ucc gac cuu cag cag auc cug	864
Arg Leu Leu Ile Ala Gly Xaa Asn Ser Ser Asp Leu Gln Gln Ile Leu	
275 280 285	
agc cua cuc gaa ucc aac aaa gac uug cug uug acu agc uca uac cug	912
Ser Leu Leu Glu Ser Asn Lys Asp Leu Leu Leu Xaa Ser Ser Tyr Leu	
290 295 300	
ucu gau ucu ggu ucu acu ggg gag cau aca aaa ucc cua guc aca cag	960
Ser Xaa Ser Gly Ser Xaa Gly Glu His Thr Lys Ser Leu Val Thr Gln	
305 310 315 320	
uau uug aaU gcc acu ggc aaU cgc ugg ugc agc ugg agu uug ucu cag	1008
Tyr Leu Asn Ala Xaa Gly Asn Arg Trp Cys Ser Trp Ser Leu Ser Gln	
325 330 335	
gca agg cuc cug acu ucc uuc uug ccg gcu caa cuu cuc cga cuc uac	1056
Ala Arg Leu Leu Xaa Ser Phe Leu Pro Ala Gln Leu Leu Arg Leu Tyr	
340 345 350	
cag cug aug cuc uuc acc cug cca ggg acc ccu guu uuc agc uac ggg	1104
Gln Leu Met Leu Phe Thr Leu Pro Gly Thr Pro Val Phe Ser Tyr Gly	
355 360 365	
gau gag auu ggc cug gau gca gcu gcc cuu ccu gga cag ccu aug gag	1152
Xaa Glu Ile Gly Leu Xaa Ala Ala Ala Leu Pro Gly Gln Pro Met Glu	
370 375 380	
gcu cca guc aug cug ugg gau gag ucc agc uuc ccu gac auc cca ggg	1200
Ala Pro Val Met Leu Trp Xaa Glu Ser Ser Phe Pro Asp Ile Pro Gly	
385 390 395 400	
gcu gua agu gcc aac aug acu gug aag ggc cag agu gaa gac ccu ggc	1248
Ala Val Ser Ala Asn Met Xaa Val Lys Gly Gln Ser Glu Asp Pro Gly	
405 410 415	
ucc cuc cuu ucc uug uuc cgg cgg cug agu gac cag cgg agu aag gag	1296
Ser Leu Leu Ser Leu Phe Arg Arg Leu Ser Asp Gln Arg Ser Lys Glu	
420 425 430	
cgc ucc cua cug cau ggg gac uuc cac gcg uuc ucc gcu ggg ccu gga	1344

[illegible]